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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,407	04/14/2005	Manfred Roessler	10191/3926	8244
26646 7590 07/08/2008 KENYON & KENYON LLP ONE BROADWAY NEW YORK, NY 10004				
EXAMINER				
MCGRAW, TREVOR EDWIN				
ART UNIT		PAPER NUMBER		
3752				
MAIL DATE		DELIVERY MODE		
07/08/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Advisory Action**  
**Before the Filing of an Appeal Brief**

**Application No.**

10/531,407

**Applicant(s)**

ROESSLER ET AL.

**Examiner**

Trevor E. McGraw

**Art Unit**

3752

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 3 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.  
Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: Z.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: \_\_\_\_\_.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☒ Other: See Continuation Sheet.

/Len Tran/  
Supervisory Patent Examiner, Art Unit 3752

/T. E. M./  
Examiner, Art Unit 3752

Continuation of 13. Other: Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gray (US 4,245,789) in view of Maier et al. (US 5,732,888).

In regard to Claim 7, Gray teaches a fuel injector with a solenoid assembly (14), an armature (73) acted upon by a spring (77) in the closing direction, a valve needle (72) that is connected to the armature (73) by force locking where a valve closure member (Figure 1) is formed which forms a sealing seat with a valve needle surface (Figure 1) where the armature stop face (73s) strikes against a stop face (63s) of an inner pole (63) where the surface structure of the armature stop face (73s) and the stop face of the inner pole (63s) have raised and recessed dome shaped areas (Figure 2) at a height difference of 0.4  $\mu\text{m}$  to 0.8  $\mu\text{m}$  for the inner pole stop face (63s) and 0.2  $\mu\text{m}$  to 0.3  $\mu\text{m}$  for the armature stop face (73s).

However, Gray fails to teach an armature stop face (73s) and inner pole piece being coated with a plurality of chromium layers where the height difference between the raised and recessed dome shaped areas are in a height difference between 5  $\mu\text{m}$  to 10  $\mu\text{m}$ . On the other hand, Maier et al. teaches that it is old and well known in the art to have a coating used with an armature to provide a wear resistance medium for the armature.

It would have been obvious to one with ordinary skill in the art at the time of the present invention to modify the armature stop face and inner pole piece of Gray to be made with a chromium coating as taught by Maier et al. (US 5,732,888) to provide for a high resistant coating to preclude or reduce operational wear per cycle of the fuel injector.

It is also obvious to one having ordinary skill in the art at the time the present invention was made to change the height difference between the raised and recessed dome shaped areas as taught by Gray to between 5  $\mu\text{m}$  and 10  $\mu\text{m}$  as discovering the optimum or workable ranges only involves routine skill to one having ordinary skill in the art.

Furthermore, it is further obvious to one having ordinary skill in the art at the time the present invention was made for the raised and recessed dome shaped areas to be reduced to between 4  $\mu\text{m}$  and 5  $\mu\text{m}$  as discovering the optimum value of a result effective variable further involves routine skill for one having ordinary skill in the art.

Response to Arguments

Rejection under 35 USC § 103

Applicant's arguments filed 12/14/2007 have been fully considered but they are not persuasive. Applicant's amendment to the Claim has been addressed and required minimal revision to the applied rejection mailed 07/18/2007. Examiner cannot agree with Applicant's contention regarding the armature stop face and inner pole piece are not obvious to one having ordinary skill in the art. Such changes are elementary and well within one's skill in the art. Accordingly, Examiner maintains the rejection to Claim 7 as all the limitations of the Claim are taught by Gray in view of Maier et al. One having ordinary skill would reasonably expect a level of success of the combined references. And the motivation as stated above was applied properly to meet the conditions of 35 USC § 103 (a).